

BIOGRAPHICAL SKETCH

NAME: MaryJane K. Selgrade **POSITION TITLE:** Chief, Immunotoxicology Branch

EDUCATION/TRAINING

Institution	Degree	Year	Field of Study
Heidelberg College, Tiffin, Ohio	B.S.	1969	Biology
University of Wisconsin, Madison	M.S.	1971	Medical Microbiology
University of Wisconsin, Madison	Ph.D.	1973	Medical Microbiology

PROFESSIONAL EXPERIENCE:

Chief, Immunotoxicology Br., Experimental Toxicology Div. (ETD), Nat'l Health & Environmental Effects Res.

Lab. (NHEERL), U.S. Environmental Protection Agency (EPA), Res. Triangle Pk, NC, 1991-present

Acting Chief, Pulmonary Toxicology Br., ETD, NHEERL, U.S. EPA, Res. Triangle Pk, NC, 2/02-10/02.

Adjunct Professor, College of Veterinary Science, NC State Univ., Raleigh, NC, 1995-present

Adjunct Professor, Department of Toxicology, NC State Univ, Raleigh 2004-present

Adjunct Professor, Curriculum in Toxicology, Univ. of NC, Chapel Hill, 1998-present

Acting Division Director, ETD, NHEERL, U.S. EPA, 4/98-12/98.

Chief, Immunotoxicology Section, Pulmonary Toxicology Branch, Environmental Toxicology Div., Health Effects Research Laboratory, U.S. EPA, Res. Triangle Pk, NC, 1983-1991.

Adjunct Associate Professor, Depart. of Parasitology and Laboratory Practice, School of Public Health, Univ. of NC, Chapel Hill, 1983-1988.

Research Microbiologist, Inhalation Toxicology Branch, Health Effects Research Lab, U.S. EPA, Research Triangle Park, NC, 1979 -1983.

Visiting Asst. Professor, Dept. of Microbiology, N.C. State Univ., Raleigh, NC, 1976-1979.

Postdoctoral Fellow, Dept. Bacteriology, Univ. North Carolina, Chapel Hill, NC, 1974-1976.

NRC Research Assoc., Dept. Experimental Immunology, Naval Med. Res. Inst., Bethesda, MD, 1974-76

PROFESSIONAL SOCIETIES & PUBLICATION BOARDS:

Soc. of Toxicology, Amer. Soc. for the Advancement of Science,

Associate Editor for Toxicological Sciences, Editorial Board for J.Immunotoxicology

SELECTED AWARDS AND HONORS:

Recipient Career Achievement Award, Immunotoxicology Specialty Section, Society of Toxicology, 2006

Recipient EPA Science and Technologic Achievement Awards 1988 and 2000.

Recipient EPA Bronze Medal for work developing & harmonizing immunotoxicity testing guidelines, 1999 for Toxic Mold research, 2003, and for ORD Biotechnology Research Steering Committee 2006

ORD science communication award for Asthma Research and Results Highlights document 2007

INVITED LECTURES/SYMPOSIA:(recent)

Cytokine Profiling: A Genomic/Proteomic-Like Approach to Identifying Respiratory Sensitizers. Laboratory of Respiratory Biology Seminar Series, Nat'l Inst. Environmental Health Sciences, Res.Tri. Pk, NC. Apr., 2004

Asthma research at EPA's Nat'l Health & Environmental Effects Research Lab: Environmental Risk Factors For Asthma, Science of Environmental Justice Working Conference, Boston, MA, May 2004.

Respiratory Hypersensitivity, Regulatory Perspective, Proteins, International Life Sciences (ILSI) Respiratory Hypersensitivity Workshop, Washington, DC, June 2004

Immune System Biomarkers, Agricultural Health Study Biomarker Workshop on Cancer Etiology, Chapel Hill, NC March 2, 2005

Immunotoxicity of Inhaled Compounds: Immune Suppression and Hypersensitivity. Toxicology and Risk Assessment Conference, Dayton, OH, April 26, 2005

Lecturer Advanced Tox., Univ. of NC, 1997-present; Immunotox. Course NY Univ., 1997, 1999, 2004; Biochemical Tox. Course 1997, 1999-present, and General Tox. Course 2001-present, NC State Univ., Mammalian Toxicology Course, Duke Univ. 2003-2007.

ASSISTANCE/LEADERSHIP PROVIDED TO THE SCIENTIFIC COMMUNITY:

Grants Reviewed for Air Force Office of Science Research 1997, 2000, 2002

Science Advisory Panel, Mickey Leland National Urban Air Toxics Research Center 1997-2003.
 Society of Toxicology Program Committee 1998-2001, Membership Committee 2007-2010.
 Vice President elect, then VP, then President Immunotoxicology Specialty Section, Soc. of Toxicology, 1999-2002
 Vice President elect, then VP, then President Inhalation Specialty Section, Society of Toxicology, 2003-2006.
 World Health Organization (WHO) ad hoc committee for Internat'l Workshop on Skin Sensitization, Berlin, 2006
 WHO Scoping Meeting for the Development of Guidance for Immunotoxicity Risk Assessment, 2008
 Organized and presented Immunotoxicology Course, N.C. State Univ. 1999, 2004, 2006.

PUBLICATIONS (Selected from January 1, 2000 to present, out of a career total of 118):

- Selgrade, M.J.K. Air pollution and respiratory disease: Extrapolating from animal models to human health effects. *Immunopharmacology* 48:319-324, 2000
- Lambert, A.L., Dong, W., Selgrade, M.J.K., and M.I. Gilmour. Enhanced allergic sensitization by residual oil fly ash particles is mediated by soluble metal constituents. *Toxicol. Appl. Pharmacol.* 165:84-93, 2000.
- Selgrade, M.J.K., Smith, M.V., Oberhelman-Bragg, L.J., LeVee, G.J., Koren, H.S., Cooper, K.D. Dose response for uv-induced immune suppression in people of color: differences based on erythema reactivity rather than skin pigmentation. *Photochem. Photobiol.* 74:88-95, 2001.
- Ryan, L.K., Bishop, L.R., Daniels, M.J., Costa, E.R., Selgrade, M.J.K. Role of proinflammatory and Th-1 cytokines in the enhancement of disease due to influenza infection in BALB/c mice exposed to ultraviolet radiation. *Toxicol Sciences* 67:88-97, 2002.
- Viana, M.E., Coates, N.H., Gavett, S.H., Selgrade, M.J.K., Vesper, S.J., Ward, M.D.W. An extract of *Stachy-botrys chartarum* causes allergic responses in a BALB/c mouse model. *Toxicol. Sci.* 70: 98-109, 2002.
- Selgrade, M.J.K., Kimber, I., Goldman, L., Germolec, D.R. Assessment of allergenic potential of genetically modified foods: An agenda for future research. *Environmental Health Perspect.* 111:1140-1141, 2003
- Selgrade, M.J.K. Immune System In A Textbook of Modern Toxicology, 3rd Edition (E. Hodgson, editor), John Wiley & Sons, NY, NY, pp.327-342, 2004
- Plitnick, L.M., S.E. Loveless, G.S. Ladics, M.P. Holsapple, R.J. Smialowicz, M.R. Woolhiser, P.K. Anderson, C. Smith, D.M. Sailstad, M.J.K. Selgrade. Cytokine mRNA profiles for isocyanates with known and unknown potential to induce respiratory sensitization. *Toxicology* 207:487-499, 2005
- Selgrade, M.J.K. Biomarkers of effects the immune system. *J.Biochem. & Molec. Toxicol.* 19: 177-179, 2005.
- Ward, MDW and Selgrade, M.J.K. Benefits and risks in malaria control. *Science* 310:49, 2005.
- Selgrade M.J.K., Lemanske RF, Gilmour MI, Neas LM, et al., Induction of Asthma and the Environment: What We Know and Need to Know. *Environmental Health Perspectives.* 114: 615-619, 2006
- Holsapple, M., Jones, D., Kawabata, T., Kimber, I., Sarlo, K., Selgrade, M., Shah, J., Woolhiser, M. REVIEW: Assessing the Potential to Induce Respiratory Hypersensitivity. *Tox Sci.* 91:4-13, 2006.
- Ward, M.D.W., Chung, Y., Selgrade, M.J.K. Toxicology associated with respiratory exposures to fungi (molds). In *Inhalation Toxicology*, 2nd Ed (H. Salem & S. A. Katz, Eds), Marcel Dekker, NY, NY, pp 945-62, 2006.
- Selgrade, M.J.K. and M.I. Gilmour. Immunotoxicology of inhaled compounds - Assessing risks of local immune suppression and hypersensitivity. *J. Toxicol. Environ. Health.* 69:827-844, 2006
- Selgrade, M.J.K., Boykin, E.H., Haykal-Coates, N., Woolhiser, M.R., Wiscinski, C., Andrews, D.L., Farraj, A.K., Doerfler, D.L., Gavett, S.H. Cytokine profiles do not predict antibody responses and respiratory hyperresponsiveness following dermal exposure to isocyanates. *Toxicological Sciences* 94: 108-117, 2006.
- Selgrade, M.J.K. and B.J. Meade. Allergy to Chemicals and Proteins: An Introduction. In *Immunotoxicology and Immunopharmacology*, Third Edition, R.W. Luebke, R.V. House and I. Kimber, Eds., Taylor and Francis CRC Press, Boca Raton, FL, pp 543-557, 2007
- Farraj, A.K., Boykin, E.H., Haykal-Coates, N., Woolhiser, M.R., Gavett, S.H., Doerfler, D.L., Selgrade, M.J.K., Th2 Cytokines in Skin Draining Lymph Nodes and Serum IgE are Not Predictive of Airway Hypersensitivity to Isocyanates in Mice, *Toxicological Sciences*, 100(1), 99-108, 2007.
- Selgrade, M.J.K., Immunotoxicity – The risk is real. *Toxicological Sciences*, 100 (2), 328-332, 2007.
- van Loveren, H., Cockshott, A., Gebel, T., Gundert-Remy, U, de Jong, W., Matheson, J., McGarry, H., Musset, L., Selgrade, M.J.K. and Vickers, C., Skin sensitization in chemical risk assessment: Report of a WHO/IPCS international workshop focusing on dose-response assessment, *Regulatory Toxicol. Pharmacol.*, In Press 2008.
- Selgrade, M.J.K., Plopper, C.G., Gilmour, M.I., Conolly, R.B., and Foos, B.S.P. Assessing the Health Effects and Risks Associated with Children's Inhalation Exposures – Asthma and Allergy, *J Toxicol Environ Health Part A*, 71(3), 196-207, 2008.
- Bowman, C.C & Selgrade, M.J.K. Differences in Allergenic Potential of Food Extracts Following Oral Exposure in Mice Reflect Differences in Digestibility: Potential Approaches to Safety Assessment, *Toxicol. Sci.*, In Press.